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Animal Welfare Information Center

Newsletter

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CONGRESS IN SESSION

by Cynthia Smith

- **H. R. 512 To prohibit the expenditure of funds from the Land and Water Conservation Fund for the creation of new National Wildlife Refuges without specific authorization from Congress pursuant to a recommendation from the United States Fish and Wildlife Service to create the refuge.**

Introduced on February 4, 1997, by Don Young (R-Alaska) and referred to the Committee on Resources and the Subcommittee on Fisheries Conservation, Wildlife, and Oceans. Executive comment was requested from the Secretary of the Interior on February 18 and subcommittee hearings were held on March 6. This act may be cited as the "New Wildlife Refuge Authorization Act."

"Notwithstanding any other provision of law, no funds may be ex-

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30 YEARS OF THE ANIMAL WELFARE ACT

by

Congressman George E. Brown, Jr.

The author represents the 42nd District of California and has been instrumental in passage of animal welfare legislation in the U.S. Congress. This article is taken from a speech prepared by Congressman Brown in September 1996 commemorating the 30th anniversary of the Animal Welfare Act.

I appreciate the opportunity to be with you today to celebrate the 30th anniversary of the Animal Welfare Act. The Animal Welfare Act is this Nation's primary Federal law regarding animal care, and it sets standards for the treatment of animals by breeders, exhibitors, and transporters, as well as research facilities using animals in research. The passage of the Animal Welfare Act was a monumental achievement, and it has been improved upon through subsequent amendments. However, all of us who work on these issues know that more still needs to be done in the next 30 years.

Advocates of a humane ethic for animals are gaining momentum in this country. This movement gains its strength from a very basic philosophy regarding the sacredness of life. While recognizing the role that animals have traditionally played in society as food sources, companions, and research models, we have to always remember that animals are sensing, living beings capable of feeling fear and pain, and that they must be respected as such.

There are few issues confronting Congress where the advocates hold such an emotional commitment. Promoting proper care and protection of animals has been a priority of mine throughout my public career. Several issues were being brought before the California State Legislature when I was

a representative close to 40 years ago. And to be quite frank, these issues are, more often than not, low on the overall political agenda of our policymakers and are not regarded as the most critical issues of the times.

As you know, politicians are fairly slow to propose controversial changes. To be too far in the forefront of our changing culture is to commit political suicide. Because of the lack of political motivation and the unfortunate opposition which many times accompanies efforts to improve the treatment of animals, changes made regarding animal welfare laws have been gradual changes over time, designed to keep abreast, or at least to minimally address, changing views in our society. The Animal Welfare Act and the subsequent amendments, therefore, represent important, but moderate changes, made in response to the growing concern about the welfare of animals.

In October 1981, we held hearings in the Science Subcommittee reviewing current practices of laboratory animal care, use, and treatment. The 2 days of public hearings centered on testimony by representatives from Federal agencies, animal welfare societies, and research and educational institutions.

The hearings were a result of an individual's claims to police a month before and the subsequent arrest of a researcher and his animal caretaker on charges that 17 monkeys were being

mistreated at a Silver Spring, Maryland, research facility.

The subcommittee's review also provided grounds for additional congressional hearings that focused on the Animal Welfare Act. Senator Bob Dole conducted hearings in 1983, and I held hearings in 1984. The testimony presented at those hearings was, by and large, the basis for legislation that we sponsored in 1984 and 1985—the "Improved Standards for Laboratory Animals Act." The purpose of the legislation was to amend some provisions of the Animal Welfare Act (AWA) in light of allegations that the U.S. Department of Agriculture was not adequately enforcing the standards established for the care and treatment of laboratory animals.

This legislation addressed the legitimate concerns which arose from well-publicized accounts of substandard research facilities which had neglected animals and grossly violated animal care regulations. It was basically another step to bring our laws a little closer to the growing concern about the care of laboratory animals. At the same time, the legislation was moderate and did not place an unbearable burden upon research institutions.

The 1985 amendments strengthened standards of animal care by requiring the use of pain killers and presurgical and postsurgical care, requiring animal care training for personnel who work with animals, requiring euthanasia of an animal upon completion of an experiment, and provided for exercise of dogs and a physical environment to promote the psychological well-being of nonhuman primates. The amendments also required the Animal and Plant Health Inspection Service (APHIS) to inspect facilities at least once a year and to inspect Federal agencies' facilities. It also established a national information service [the Animal Welfare Information Center] on alternative research procedures, as well as on ways to reduce unintended duplication of experiments.

Ideally, it would be nice if we could develop sufficient alternative procedures to be able to eliminate the use of live animals altogether, through the use of tissue cultures, computer programs, and other models. I strongly support the development of alternatives to the use of live animals wherever possible. While Chairman of the Subcommittee on Science, Research, and Technology, I held hearings on the use of animals in research and on alternative research methods. In this subcommittee, I had the opportunity to work on legislation providing for the humane care of laboratory animals and which encouraged the development of alternatives to the use of live animals in research.

In addition to the issue of the care and treatment of animals, the problem of lost or stolen companion animals being used for research was also a major motivation for the original enactment of the Animal Welfare Act.

Unfortunately, the Animal Welfare Act has not had great success in preventing lost or stolen pets from entering the research animal trade. This is mainly because the statute allows individuals who gather animals from random sources to be licensed by the USDA to provide these animals to research facilities. These dealers, known as Class B dealers, routinely buy and sell stolen family pets, purchase animals without records from public auctions, and "adopt" animals from pounds and families under false pretenses.

For many years, I have been deeply concerned that the pet theft provisions of the Animal Welfare Act are not being adequately enforced. It has been revealed, through the media and through USDA's own Inspector General, that inspectors have knowingly ignored repeated violations of Federal laws, in-

cluding the falsification of records of animal origins, the only way to ensure that stolen animals are not entering the research animal trade.

As Chairman of the Department [of Agriculture] Operations, Resources, and Foreign Agriculture Subcommittee, I held a hearing on the Pet Theft Act during the 100th Congress. This measure was designed to protect household pets from being stolen and sold to research laboratories. This legislation had passed the Senate but failed to reach the House floor before Congress adjourned.

In April of this year [1996] I joined Congressman Charles Canady in introducing H.R. 3398, the Pet Safety and Protection Act, which would amend the Animal Welfare Act to ensure that all dogs and cats used by research facilities are obtained legally.

Adequately addressing the problem of pet theft is one of many challenges that APHIS and the Animal Welfare Act will face in the coming years. In the areas of animal care and treatment, the Animal Welfare Act needs to be strengthened and improved upon. This may require USDA coming to Congress and requesting legislation that will grant them greater authority to effectively enforce the Act.

The USDA Inspector General's January 1995 report—Animal and Plant Health Inspection Service (APHIS) Enforcement of the Animal Welfare Act—stated, "APHIS does not have the authority ... to effectively enforce the requirements of the Animal Welfare Act." I am deeply concerned with the agency's ability and willingness to adequately monitor and reasonably ensure the humane care and treatment of animals.

Lack of adequate resources is part of the problem associated with APHIS' ability to adequately monitor and inspect animals and facilities and to enforce the pet theft provisions of the Animal Welfare Act. In the past, I have testified before the Appropriations Committee in favor of increased funding for enforcement of the AWA. Members of Congress concerned about the funding levels for APHIS had to be particularly diligent during the Reagan Administration, when repeated attempts were made to eliminate entirely funds to enforce the Animal Welfare Act.

In addition to fiscal constraints, however, the Inspector General's report indicates that APHIS has been neglecting its statutory obligations and has renewed facility licenses even when cited violations—past and present—had not yet been corrected. Additionally, APHIS is not inspecting research facilities before issuing the initial registrations; therefore, non-compliance with the Act may go unnoticed until APHIS' first inspection up to a year later.

It was clearly the intent of Congress that facilities should come into compliance before being issued the initial registrations. Section 2.3 of the Animal Welfare Act, among others, implicitly gives APHIS the authority to conduct inspections and to deny renewals.

I hope that the advances made through the Animal Welfare Act and other legislation aimed at protecting animals can be improved upon in future years. Much more needs to be done to ensure that the animals in our care are treated humanely. This should not be seen as a threat to the research community. It is simply a reaction to the growing concerns of society and should be accepted as such. And it is in the best interest of those who rely on animals to accept this growing change and work with policymakers to develop legislation which addresses the concerns of the animal welfare movement

(Brown cont'd p. 23)

Alternatives to Animal Models in Diabetes Research

by

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[Ed. note: In December 1996, AWIC staff were invited by Dr. Doug Erbeck to present a workshop on the Animal Welfare Act to his animal technology class at Murray State University. Paul Jaco, a senior, was the winner of a poster competition between members of the class. He is currently in graduate school at Murray State University. We invited him to write this article for the AWIC Newsletter.]

In the past century, scientists have moved toward using fewer animals in research by choosing alternatives models. The concept of "alternatives" was developed in 1959, with the publication of *The Principles of Human Experimental Technique* by W.M.S. Russell and R.L. Burch. They proposed the three R's of research: replacement, reduction, and refinement.

Replacement is more than substituting animals with non-animal models. In fact, replacement can be as simple as replacing a warm-blooded animal with a cold-blooded animal. An example of this is Teleost fish used in research of diabetes mellitus. Many times companion animals are replaced with less sentient animals such as rodents. Other avenues of replacement are computer simulations, tissue cultures, and many other models.

Reduction may be accomplished by simply reducing the numbers of animals used in the research. One example is proper application of statistical information. Reduction can also involve organs and tissues taken at the animal's time of death to be used for research that does not involve whole animals.

Refinement is the best quality care that can be afforded the animal. This may involve training the staff in the area of husbandry, or training the animals with behavior enhancement. It has been found that social interaction with animals leads to less distress on both staff members and the animals being studied in research.

In addition to the 3 R's of Russell and Burch, a fourth R has recently been introduced to the scientific community. The fourth R overlaps some of the refinement techniques. Ronald Bank, D.V.M., (1995) proposed the 4th R of research as being Responsibility. He states, "Responsibility toward research animals focuses new facility design and facility renovation toward accommodation of social interaction and behavioral interplay performing approved experimentation in a manner as distress free as possible, with analgesics or anesthetics used when necessary, of sufficient efficacy and dosage to ameliorate pain and distress." We also share a responsibility to educate the public and show them that we do care about the welfare of the animals.

Using animal models in diabetes research began in 1890, when Von Merhring and Minkowski began studying the digestive functions of the pancreas (Von Mehrling and Minkowski 1890, Herbery 1988). They noticed that the animals on which they had performed a pancreatectomy developed acute

diabetes mellitus. Things have changed considerably since the 1890's when Von Merhring and Minkowski did their research. Today, very little research is done involving animals without considering possible alternatives. Before involving animals in research, we must consider the 3 R's of Russell and Burch in order to satisfy Institutional Animal Care and Use Committees and funding agencies such as the National Institutes of Health (Hart 1995, Erbeck 1996).

Perhaps the most sought-after alternative is replacement. Scientists doing research on diabetes are finding several replacements for higher animals. One such replacement involves the Goby fish (*Gillichthys mirabilis*) (Bern et al. 1992, Kelly 1995). This advanced Teleost has a single mesentery-bound pancreatic endocrine organ that is separate from the exocrine pancreatic acini. The organ is located next to the portal vein, and its removal (isletectomy) is very simply done through a small incision on the ventral surface of the fish. Many fish have these separate pancreatic endocrine organs that may be referred to as principal islets or Brockmann bodies (Kelly 1992).

After the isletectomy, these cold-blooded vertebrates show clinical signs of a typical Insulin Dependent Diabetes Mellitus (IDDM) mammal. The fish lose body weight and show slow skeletal growth and skeletal retardation which is measured by body length. They also show 50 percent reduction in cartilage. After these animals are given insulin, they respond like mammals. Kevin Kelly (1992) states, "The establishment of this unique model of IDDM in an ectothermic vertebrate should prove valuable for future comparative studies on the role of insulin and other pancreatic factors in the regulation of metabolic and growth processes."

Another way replacement is shown in diabetes research is with laboratory rodents. Rodents are beneficial in several ways. Their low maintenance and their short generation time allow careful and controlled experiments to be conducted. Since laboratory rodents usually breed very easily, diabetes can be genetically established in a colony. This makes an excellent model for the study of genetic factors. Environmental factors such as pharmaceutical actions on diabetes mellitus are also easily observed.

Rodents, whether rat, mouse, hamster, or guinea pigs, and the rabbit make suitable models for spontaneous diabetes. They are used to study the natural development of the disease. In the early days of diabetes research, the best and quickest way to induce diabetes was to perform a pancreatectomy just as Von Mehrling and Minkowski did with cats, rabbits, pigs, pigeons, ducks, dogs, and primates.

In recent years, scientists and technologists have worked diligently toward refining techniques that have led to the discovery of chemical agents that physiologically alter the function of the pancreas. The advantage to using such chemicals is that body changes during and after the induction of diabetes can be observed. The five major classes of diabetogenic

agents are chemicals, biological agents, peptides, potentiators, and steroids. Perhaps the most commonly used chemicals agents are alloxan and streptozotocin (Mendez and Ramos 1994). These compounds target the Langerhans islets beta cells. Because of its pathology potential, alloxan is preferred for the rat.

Still another avenue of refinement is gene alteration and transgenic models (Miyazaki and Tashiro 1993). A transgenic organism is "an organism in which foreign DNA is integrated into the genome early enough in development to transform all cell lineage. The foreign gene would then be passed on to progeny" (Elseth and Baumgardner 1995). With transgenic models, the animal cannot be completely substituted for a non-animal model such as cell culture. Instead, transgenic models are used mostly as a refinement technique in mice. Mice allow us to look at the molecular mechanisms of the autoimmunity against beta cells as well as the disease-influenced genes. There is no surgery required for animals being studied, which makes this model a very humane source for obtaining research data.

In some cases, replacement can be attained by completely eliminating animals. One replacement is the use of a glucose kinetics simulation model that estimates the glucose utilization rate in IDDM and IIDM (Insulin Independent Diabetes Mellitus) individuals. In this complex model, there are at least 16 different variables to consider (Boroujerdi et al. 1995). The factors are plugged into a mathematical equation that allows interpretation of the results of the synthetic model.

The 3 R's, when demonstrated in actual research, may overlap. For example, the glucose kinetics simulator was proposed as a replacement tool in IDDM studies. This model is also an excellent source of reduction. To gather the original data for diabetic patients that the model simulates, diabetic patients were closely examined after three regimens of insulin therapy. The first regimen was 24 hours after insulin withdrawal. The data was recorded after conventional insulin therapy and after an overnight insulin infusion. Investigators compared the results with those that had already been published from glucose clamp experiments (Boroujerdi et al. 1995). They were able to collect a range of glycemic levels and insulin concentrations. The kinetics simulator not only reduced the number of animals being used, but also reduced the labor of the research staff. For a laboratory to work with large numbers of research animals, it must have the correct facility design as well as people properly trained in animal husbandry. These concerns were greatly reduced when the glucose kinetic simulator was used.

Nutrition is becoming a major concern in the prevention of diabetes (Herbery 1988). In much of the nutrition-related diabetic research, animals with the disease are closely monitored with a set sugar intake, restricted carbohydrate levels, and a strict regimen of exercise. This enables the investigator to view the longterm effects of diabetes while using the same subjects. Again, the number of animals used is minimized. A certain amount of refinement in the health concerns of these animals is also seen. The exercise is clearly a commendable part of husbandry and can be considered environmental enrichment. In this research the data does not suffer, rather it is helped.

Researchers understand that the word "alternative" has many sides. Each avenue should be studied to fit the proposed research. Depending on the type of research, there

may be several models that employ the 3 R's. Then researchers can examine the affordability of the models and how well the results will simulate the desired outcome. Deciding which model to use in research is usually not a quick or easy decision. The examples given in this paper succeeded by giving reliable and consistent data for research in diabetes while considering the concept of alternatives.

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AWIC: A Historical Survey of Significant Events, 1986 - The Present and a Glimpse of the Near Future

by

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In the 1985 Animal Welfare Act (AWA) amendments, it is interesting to note that there is a mandate for the research community to use emerging, increasingly powerful electronic databases. Possibly this is one of the **first** times that Congress realized the power of computer databases and purposely ordered their use. Since the U.S. Department of Agriculture (USDA) regulates the AWA, the National Agricultural Library (NAL) was the logical place for Congress to require the development of an animal welfare information program that would be accessible to the regulated community. This congressional information mandate changed NAL in many ways as the Animal Welfare Information Center took shape and substance. Changes occurred in collection and indexing policies, innovations in information delivery were tried for the first time, and there was recognition of NAL by a new group of users. We have also affected the regulated community, in a positive way I hope, and, needless to say, the regulated community has molded us. We are here to serve you.

Personally, I think we have succeeded in meeting our mandate with a program of activities, services and information products that has been more effective and influential than most people expected. No one has ever been turned away because s/he could not afford to pay for such services or information. At such times, I feel that we have succeeded in giving the taxpaying public the services that Congress expected. I feel privileged to have been allowed the responsibility to develop a program from concept to functional reality; from an non-existent program into an internationally known resource and model.

Needless to say, the process of program development has not always gone as smoothly as hoped, nor have we done everything that we felt was important to do. We didn't have any NAL programs to model as NAL is not a repository of biomedical information as is the National Library of Medicine. We had to decide what to add to the NAL collection and the AGRICOLA database; some people felt that we

were superfluous and really not needed by the potential users. In the face of these challenges, we found a niche that is unique. The program has been productive and stayed focused on those topics that Congress wanted addressed and, in the process, gained a credible reputation. However, there is still much to be done. We would like to continue to meet these challenges for 10 more years. I feel that as long as there is a regulated community, there will be a need for the AWIC program and services.

The rest of this presentation will provide a brief summary of the evolution of the AWIC program, the major ac-

complishments of the first decade of the program, and what the future may hold.

Many of you have read the text of the 1985 AWA amendments that established the Center. You are aware that we are to provide information to support those people and institutions regulated under the AWA. But, I will briefly review the congressional mandate: The Center is to provide services and information to address employee training for the proper handling of animals, methods to alleviate

pain and distress, and alternatives based on the 3Rs of Russell and Burch. We have seldom deviated from this mandate, although you will see publications related to farm animal welfare that we have produced as part of the NAL mission to serve agriculture. The first activities started in 1986.

The Early Years

The earliest reference to the Center is in April 1986. The reference is noteworthy because it uses the title of "Animal Welfare Information Center." Obviously, it had been officially established as the name of the Center. However, I suspect that a name that reflected more of the congressional mandate might have been better. Responses by those un-



Jean Larson receiving a Certificate of Appreciation from Dale Schwindaman, retired Deputy Administrator of Animal Care.

Photo by Joe Swab, National Agricultural Library

mandate might have been better. Responses by those unfamiliar with AWIC indicate they assume we are a private group unaffiliated with the U.S. Government.

In August 1986, Joseph Howard, Director, NAL, and others attended a meeting with Christine Stevens, Director, Animal Welfare Institute, to discuss the formation of an information service at NAL. Stevens was very interested in how the information service was progressing at NAL since she was so instrumental in the passage of the 1985 amendments. Other activities included purchasing books and journals and exhibiting for the first time at the annual meeting of the American Veterinary Medical Association.

Initial program funding of \$750,000 for 1 year had passed the House and was due to go to the Senate. It was eventually passed and was passed through APHIS to NAL. It was only 1 year, mind you. NAL administrators had no idea that there would be funding for anything other than that year!

However, to the surprise of everyone, Congress appropriated \$750,000 again for the program in the fiscal year 1987 budget. Funding uncertainties continued to make planning an ongoing program difficult, but it was beginning to be clear that this was going to become a permanent program at NAL. In February 1987, I was asked to be the acting coordinator of the Center. I had started the Biotechnology Information Center earlier that year and since I was the only person on the NAL staff that had worked with animals in research, I was asked to also take on the position as head of the AWIC program. It didn't look like too much work, so I agreed.

This year (1987) the first additional staff were hired. It was also the year when the AWIC grants program was started. I still consider the grants program one of the ways that we contributed significantly to the generation of useful information products for those using animals in biomedical research. Through the years, many outstanding projects were completed. Overall, I think we got a lot of bang for the buck. I am sorry that we no longer have these funds.

In 1988, staff began to produce subject-oriented bibliographies and grapple with how to do an "alternatives search." It is interesting to note that this was the first year that we started to disseminate information electronically. AWIC funds were used to develop a bulletin board system at NAL. The system was named the Agricultural Library Forum. This sounds lofty until you use the acronym — ALF. I seldom used that acronym in public as you can imagine!! Over the years many AWIC publications have been made available on that system. Time marches on even for bulletin boards, and the system has been replaced with a World Wide Web home page.

Although the Center was becoming recognized as a source of information on the care and use of animals in commercial enterprises (our requests had topped the 1,000 mark), the program was suffering from the disruptions caused by uncertain year-to-year funding. This dilemma was recognized by Stevens, and I believe it was mostly through her efforts that the funding was transferred to NAL for FY 1989. The certainty of funding allowed the program to really begin to grow and blossom.

There were a lot of "firsts" in 1989. The first information product funded by AWIC was a comprehensive bibliography—Laboratory Animal Welfare—compiled by the Scientists Center for Animal Welfare. It was the first of several SCAW publications that we supported.

Another major event that involved the staff was the production of a videotape about the products and services of AWIC—"Resources Today for the Research of Tomorrow." "We all got to be stars in that one. We shared our stardom with people from other facilities—Kathy Nepote of the University of Maryland, Stephen Shiffer of Georgetown University Medical School, and Peggy O'Neill of the National Institutes of Health. If you have looked at the tape, you may say that you didn't see O'Neill. You are right, the primates were so obnoxious and so noisy during the taping, that there was no good footage to put into the final film! Most of the 1,500 or more copies are still being used as a training video around the country.

For the first time, AWIC program and usage statistics were included in the annual report that APHIS produces for Congress on animal welfare activities. In 3 years, the user statistics had increased from 0 to 1,523 reference requests answered and 12,900 publications distributed!

The Later Years

In 1990, we published the first AWIC Newsletter. Little did we know that our modest attempt at communicating with our users would end up expanding from 4 pages to 24 and from a mailing list of a few hundred in the United States to over 6,500 people in 41 countries.

It is clear that AWIC has advanced from an unknown to an internationally known resource in the last decade. By way of illustration, while completing a recent monthly report, we noted that we had requests for our publications from Sweden, Switzerland, India, Hong Kong, Denmark, Germany, the Netherlands, Canada, Australia, Puerto Rico, and South Korea. [Ed. note-AWIC was recently asked to cooperate with USDA's Animal and Plant Health Inspection Service Emergency Programs and the Government of Taiwan as it battles a serious outbreak of foot-and-mouth disease that threatens the Taiwanese swine industry.] This list over the years has included most major countries. Lest you worry that we are only sending out materials and not receiving anything back, let me reassure you. It appears that as a result of our generosity, we have been sent many publications and subscriptions that are now included in the NAL collection. It is my experience we have gained many items that would be difficult to obtain any other way.

Also in 1990, we published what may end up being considered our most useful grant product. We entered into a cooperative agreement with Dr. Taylor Bennett of the University of Illinois at Chicago to produce a manual of basic animal handling research procedures. The manual is entitled *Essentials for Animal Research: A Primer for Investigators*. It was our largest print run ever. More than 7,000 copies were printed and distributed within about 2 years. This document has been used by many institutions as a textbook for beginning students, a laboratory resource, a library reference book, etc. We recently published a second edition which was distributed in both electronic and paper copy. It is now once again out-of-print but is available on the NETVET website at netvet.wustl.edu/org/awic/bib/essentia.htm

We began collaborations with other groups when we worked with the National Institutes of Health, Office of Protection From Research Risks, and the National Library of Medicine to produce *Information Resources for Environmen-*

tal Enrichment of Primates — a bibliography and resource manual on psychological well-being of primates. The availability of the document from NAL/AWIC was announced in the Federal Register. This publication has also been updated with the help of additional collaborators — the Primate Information Center, and Dr. Viktor Reinhardt.

Our first venture into the training arena occurred May 23-24, 1991, when we held a workshop at NAL on "How to Use NAL for Animal Welfare Information." We still conduct this workshop — now titled *Meeting the Information Requirements of the Animal Welfare Act* — as a regularly scheduled activity. Normally, we conduct it at NAL three times per year. We also take it on the road to distant venues on a cost-recovery basis. We have provided it to major companies such as Johnson and Johnson, 3M, and Monsanto, to staff at several universities, and as a continuing education course for librarians and scientists. Actually, for those who take the course at NAL, they receive certificates signed by the Director of the Library and the APHIS Deputy Administrator for Animal Care. Over 2,000 people have taken some form of the class, and participants have come from as far away as Germany, Canada, and Puerto Rico.

In 1991, AWIC won the American Library Association's John Cotton Dana Award for outstanding public relations among special libraries. The citation reads "For a multifaceted public relations program to increase awareness and use of the Animal Welfare Center through effective outreach activities." It was a nice moment of recognition for a creative, dedicated, and hard-working staff.

In 1992, we began a collaboration with Dr. J. Fox of the Massachusetts Institute of Technology to produce a bibliography on ferrets used in biomedical research. This has proved to be so comprehensive that a group organized to provide information on ferrets has used it as the basis of a database of bibliographic information on ferrets.

This year (1992) was also the beginning of an initiative of the Johns Hopkins Center for Alternatives to Animal Testing to convene a congress, in Baltimore, on the topic of alternatives and animal use in the life sciences. AWIC supported this effort with funding and planning time. This initiative — *The First World Congress on Alternatives and Animal Use in the Life Sciences: Education, Research, and Testing* — was attended by about 600 people from around the world. It was considered so successful that a second Congress was held in Utrecht, The Netherlands in October 1996. A third Congress is being planned for Italy in 1999.

AWIC also provided the important level of funding for the *First International Conference for Veterinary Information Specialists*. It was held in 1992 in Reading, England. We were able to interact with people from Africa, all of Europe, South America, etc. Here again, this has turned into an ongoing activity. In 1997, there will be a conference in Frederiksberg, Denmark.

In the last few years, we have had several fruitful collaborations with both the Universities Federation for Animal Welfare (UFAW) of the United Kingdom and with the Ministry of Agriculture and Fisheries (MAF) of New Zealand. With UFAW we produced the recently published *Environmental Enrichment Information Resources for Laboratory Animals* and with MAF we have exchanged many important publications. We now have a complete set of MAF's codes of practice that detail appropriate care and husbandry of animals in New Zealand. These have been used by USDA staff who have been

working on regulations for farm animals used in biomedical research.

AWIC staff have provided extensive searches for the committees that worked to update the Institute of Laboratory Animal Resources (ILAR) *Guide for the Care and Use of Laboratory Animals*, and for the *Guide for the Care and Use of Agricultural Animals in Agricultural Research and Teaching*.

One offbeat activity was being filmed for the Italian TV program Super Quark — a program specializing in science and technology issues.

Before saying a few words about the future, I would like to give you some usage statistics for some of the basic activities of AWIC.

In our first 10 years we have:

- answered over 12,000 reference requests
- responded to about 20,000 requests for publications
- distributed over a quarter of a million paper publications
- interacted with 30,000 to 40,000 people at conferences, presentations, and workshops
- trained more than 2,000 people at our AWA workshop

About 45 percent of our users are researchers, technicians, veterinarians, IACUC members and exhibitor/dealers, 30 percent are educators or students and organization members, and the rest are government, Members of Congress, private citizens, librarians, etc.

In The Works

As you might imagine, AWIC staff are actively involved in using the power of the Internet to disseminate information faster in a more cost-effective way. I would like to mention several important electronic initiatives that are in the works.

1. Many of the AWIC documents have been available on Internet via NETVET at Washington University. But, D'Anna Jensen has begun the process of bringing the AWIC documents back to the NAL server, expanding the files and adding additional information and links, and making them available to the regulated community through the NAL home page.

2. The CARE (Compendium of Animal Resources) CD-ROM is now available. Mike Kreger has been working with electronic files for several years now, and has spent a good part of the last year working on this project. His efforts have resulted in a disk that includes many of the major federally produced and organizational documents regarding the use of animals in research, testing, and exhibits — 163 documents in all. Even the new ILAR *Guide for the Care and Use of Laboratory Animals* is on the CD. Many organizations were involved in the project by providing about \$30,000 in funding, helping to put information into electronic format, providing electronic text, proofreading, beta testing, etc. We are hoping the CD will be considered a valuable resource that will provide quick and complete answers to questions that can only be answered from these documents. One-stop electronic shopping!

3. We plan to put parts of the previously mentioned workshop *Meeting the Information Requirements of the Animal Welfare Act* into electronic format and make it available on the NAL/AWIC website. There are also plans to put the newsletter on the WWW with linkages to other sites related to the subject matter of the articles.

(AWIC History cont'd p. 23)

Search For Animal Testing Alternatives Leads Diverse Partners To New Website Project

Baltimore, Maryland, March 12, 1997 — A diverse group of organizations announced today they will work together to increase access to information on ways to reduce, replace and refine the use of animals in research, education and testing.

The coalition will focus on developing the Alternatives to Animal Testing Website. This comprehensive global resource will serve as an accessible central location for scientists, educators, veterinarians, and individuals throughout the world to obtain information on alternative methods.

The initial coalition includes The Humane Society of the United States (HSUS), the Center for Alternatives to Animal Testing (CAAT) at the Johns Hopkins University School of Public Health, The Procter & Gamble Company, the National Institutes of Health's Office for Protection from Research Risks (OPRR), the U.S. Department of Agriculture's (USDA) Animal Welfare Information Center (AWIC) and Animal & Plant Health Inspection Service (APHIS), the Food and Drug Administration's Office of Science, and Utrecht University in The Netherlands.

In announcing the global Website, Alan M. Goldberg, Director of CAAT, said, "The major problem we face today is that there is no single definitive source for information on alternatives to animal testing. Establishing this Website is the beginning of a long-term effort by scientists and the animal protection community to bring together existing information and create the opportunity to share new information on alternatives."

The effort is designed to bring together government agencies, the academic community, animal protection groups, and private industry to encourage the use of alternative methods via the "Three Rs" that:

- **replace** existing animal methods with non-animal methods whenever possible;
- **reduce** the number of animals needed; or
- **refine** research procedures, where animal use remains necessary, to minimize the pain or discomfort of test animals.

The HSUS, OPRR and Procter & Gamble will provide initial funding to establish the Alternatives to Animal Testing Website. The Website will —

- Serve as a resource for scientists seeking technical information on alternatives in biological research, testing and education.
- Host bulletin boards and discussion areas that allow scientists to share information.
- Link electronically to other sources of information on alternatives.
- Have access to a search engine that will improve current capability for searching the Internet for information on alternatives to animals in testing, education and research
- Provide information specifically geared to educators and the general public interested in the Three Rs of alternatives.

President of HSUS Paul Irwin called the Website project "an important milestone in the 40-year history of the 'Three Rs' approach. Development of this Website will hasten the day when the 'Three Rs' become a guiding principle in animal experimentation throughout the world."

Procter & Gamble Chairman & Chief Executive John Pepper said, "P&G's investment in this Website is in response to our scientists and consumers who have shown growing support for our commitment to help develop alternative methods of testing new ingredients for everyday products, methods that don't involve testing on animals."

"To ensure the long term success of the Website, however, we need others in industry, government, academia, and the animal protection community to join us in supporting this important global resource," Pepper added.

While the initial members of the coalition are based in the United States, Goldberg said he has received strong support for the Website from organizations throughout the world. The coalition sponsored a meeting of representatives from almost all of the existing alternative methods databases at the World Congress on Alternatives and Animal Use in the Netherlands in October 1996. Goldberg said most of these groups have indicated their willingness to participate and have their websites linked to the Alternatives to Animal Testing Website.

The Alternatives to Animal Testing Website can be accessed on the Internet at <http://infonet.welch.jhu.edu/~caat>. By the end of its first year, Goldberg believes the Website will be the most comprehensive global resource on animal alternatives.

For additional information, contact Judy Montgomery Patton, The Procter & Gamble Company, at phone: (513) 945-8039, or Joanne Zurlo, Johns Hopkins Center for Alternatives to Animal Testing at phone: (410) 223-1693. ■

AWIC: It's not just the 'Law,' it's a good idea!

by

Stephen Dubin, V.M.D., Ph.D.
Biomedical Engineering and Science Institute
Drexel University, Philadelphia, Pennsylvania

Introduction

It is certainly an understatement to say that the current U.S. Animal Welfare Act and its implementation are a disappointment to animal rights advocates. There is, however, a provision of the Act which is both well-conceived and nicely implemented. That is the Animal Welfare Information Center (AWIC) with its headquarters at the National Agricultural Library in Beltsville, Maryland. It is, indeed, the "rose among the briars."

Veterinary students and others interested in promoting the well-being of nonhuman animals can obtain much useful information by studying the provisions of the Animal Welfare Act regarding AWIC and, particularly, how you can make use of their resources and services. We also need to be particularly well-prepared with literature citations to help reinforce discussion with those who are not "members of the choir."

Historical and Legal Background

As with most Federal laws, the statute itself contains only the general goals and an outline of implementation. Much of the actual business end of the law is contained in the accompanying regulations. In addition to advocating that activities "avoid or minimize discomfort, distress, and pain to the animals," these regulations actually contain the "A" word - "alternatives." The investigator has a positive obligation to search for alternatives to nonhuman animal suffering or distress as well as to avoid unnecessary duplication of procedures involving them and to provide a written description of those endeavors. Institutional authorities may want to limit public access to this information where trade secrets or the national security interest might be compromised. But these factors would hardly be justified when dealing with classroom instruction or student laboratories.

Because of these information requirements, AWIC was established in 1986 in keeping with a provision (Section 13(e)) of the Animal Welfare Act (PL 99-189). In describing the mission of AWIC, the Act uses a form of the "three R's" -

The Secretary shall establish an information service at the National Agricultural Library. Such service shall, in cooperation with the National Library of Medicine provide information -

- (1) pertinent to employee training;
- (2) which could prevent unintended duplication of animal experimentation as determined by the needs of the research facility; and
- (3) on improved methods of animal experimentation, including methods which could -
 - (A) reduce or replace animal use; and
 - (B) minimize pain and distress to animals, such as anesthetic and analgesic procedures.

From the practical standpoint, AWIC resources are not confined to the narrow limits of the Act. Furthermore, the staff seems very willing to provide information in the wider context of animal welfare issues, including use of nonhuman animals in classroom instruction, food production, free animal protection, hunting and trapping, as well as general environmental concerns.

People at AWIC

The main task at AWIC is the acquisition and distribution of animal-related information. All of the information specialists have either educational or research backgrounds in some branch of animal science. At least one is particularly well-informed on wildlife and environmental matters. Others have extensive experience with farm animal care and the use of animals in pharmaceutical and agricultural research. All can help with questions relating to classroom instruction, science fair projects, and research applications. They are able to help us and they are willing to do it.

Resources

As with the other USDA information centers (food and nutrition, alternative farming, water quality, etc.), AWIC resources include those found in the center headquarters as well as the general information assets of NAL. AWIC maintains an extensive specialized collection of books, periodicals, pamphlets, news clippings, legislative documents, films, videotapes, CD's, and other computer storage media specifically in the area of animal welfare. I have been surprised to see publications - particularly European ones - that I had not seen before or elsewhere. The collection is eclectic, including the whole spectrum of animal advocacy and exploitation viewpoints.

In the AWIC office, access is available to many online databases through DIALOG. These include AGRICOLA (of which more later), MEDLINE, EMBASE, BIOSIS, CAB, and other life sciences topics. Other legal, bioethics, and specific subject databases are also accessed. [Ed. note: AWIC also has access to the PREX database at Utrecht University. This is one of the best laboratory animal science databases available. Contact AWIC for details. More information on this database will be in the next AWIC newsletter.] AWIC also makes information available through NAL's AGRICOLA database. AWIC is responsible for recommending policies and subject coverage for indexing materials on:

- humane husbandry and treatment of nonhuman animals;
- training and education of investigators and technicians;
- Institutional Animal Care and Use Committees (IACUC); philosophies of animal rights/welfare, and; alternatives to the use of animals in research, testing and education.

Through their activities over the years, the AWIC staff has developed an extensive network of experts and organizations to which they can turn for help or for referral of patrons. This same long experience has given them the ability, very often, to provide answers from their own knowledge or local files.

NAL is one of three national libraries; the others being the Library of Congress and the National Library of Medicine. It is located in Beltsville, Maryland, on the grounds of the Beltsville Agricultural Research Center. NAL has more than 2 million items including books, periodicals, reports, audiovisual materials, and computer media. Most of these are available to the public for use in the library or by interlibrary loan to other institutions. As with any large library collection, there are some rare and fragile materials with very limited access. NAL is now active in making these items more accessible by recording them on CD's, videodiscs, and other digital media. [Ed. note: Audiovisual materials and books are not loaned outside the United States and its Territories.]

AGRICOLA is a database for reference to more than 3 million citations on materials in NAL's collection. It is searchable through terminals in the library, online through DIALOG and PREX, and on CD through Silver Platter.

AWIC Services

There is an old saying, "Give someone a piece of tofu and they can eat for one day. Teach them how to stir-fry and they can eat forever." A major outreach of AWIC is in training others how to gather information on their own. Several times each year AWIC presents a workshop, "Meeting the Information Requirements of the Animal Welfare Act." This is offered at the National Agricultural Library and at other locations around the country by invitation. There is no registration charge and the take-home materials are mountaneous. When I attended, the attendees included veterinarians, medical librarians, and regulatory officials. The program gives an excellent introduction to general database searching, AWIC's and NAL's services, the requirements of the Animal Welfare Act, and an overview of IACUC responsibilities and protocol review. There are practical sessions where the participants actually search several topics with the help of the staff and the other participants. Registration is free, and lodging is available at moderate cost.

AWIC people, along with their posters, pamphlets, and computers, are quite visible at veterinary and scientific conventions, research seminars, and other conferences. They host individual visitors and classes at AWIC headquarters and accommodate scholars and others who want to conduct research.

Publications

In addition to help and instruction provided in person, AWIC has numerous publications that are available, free of charge, to the public. These include Quick Bibliographies (QB), Special Research Briefs (SRB), AWIC Series, Fact Sheets, and the AWIC Newsletter. The catalog is too long to recite in full; perhaps a few examples will suffice.

Environmental Enrichment information Resources for Laboratory Animals 1965 - 1995 is one of the most recent in the AWIC Series. Although the title would seem to limit the scope, this 300-page book covers birds, cats, dogs, and farm animals, as well as ferrets, rabbits, and rodents. For each

species group, there is a brief introductory article dealing with the natural behavior and environment followed by many hundreds of well-annotated references. Appendixes include journal listing and subscription information, organizations and international resources, suppliers of environmental enrichment products, and common enrichment programs.

I brought a class to AWIC for help in developing a report on alternatives to the LD₅₀ test. One of their major tasks was to be the preparation of a complete bibliography. To my chagrin and my students' delight, AWIC staff brought out SRB 92-12, *The LD₅₀ (Median Lethal Dose) and LC₅₀ (Median Lethal Concentration) Toxicity Tests*. This special research brief begins with a short introduction and definition of terms (another obligatory part of the student's report). It continues with 307 literature citations covering various alternatives topics ranging from reclassification of hazardous substances, computer models, structure activity relationships, tissue culture methods, and methodological weaknesses of current toxicology methods.

Means of Access

In addition to a personal visit, there are several avenues for initial and remote access to AWIC. Beginning with the most conventional, the address is

Animal Welfare Information Center
U.S. Department of Agriculture
National Agricultural Library
10301 Baltimore Avenue
Beltsville, MD 20705-2351

The main phone number is (301) 504-6212 and the fax number is (301) 504-7125. TTY (for hearing impaired) is 301-504-6856.

You may use e-mail to contact any of the information specialists:

Tim Allen (tallen@nal.usda.gov),
D'Anna Jensen (djensen@nal.usda.gov),
Mike Kreger (mkreger@nal.usda.gov)
Cynthia Smith (csmith@nal.usda.gov)
Richard Crawford, D.V.M., (rcrawfor@nal.usda.gov)
Jean Larson, AWIC Coordinator, can be reached at jlarson@nal.usda.gov There is a general e-mail address (awic@nal.usda.gov). AWIC can also be accessed on the web at <http://www.nal.usda.gov/awic>

A Final Word

Medicine, for whatever species, is replete with Latin mottoes. Some, like *Primum non nocere* (First do no harm), often seem almost beyond reach. Others like *Accipe dum dolens* (Get their money while it still hurts) are all too commonplace. One which is exemplified by the mission of AWIC and which can be a practical beginning for activity to mitigate nonhuman animal suffering is *Sapere audete*. Dare to know!

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APHIS- Animal Care Update

Questions and Answers:

When will rats, mice, and birds be covered by Federal animal welfare regulations?

The April 1996 APHIS Strategic Plan states that "Pressure on USDA to include additional species, including

rats, mice, and birds, under AWA regulation will likely continue." At this time, there are no immediate plans for coverage. For a copy of the strategic plan, please contact AWIC.

Why Retail Pet Shops Are Not Regulated.

Retail pet shops are specifically identified in the Animal Welfare Act as being exempt from the definition of a dealer if the only animals sold are animals recognized as normal pet animals. However, pet shops do fall under the definition of a dealer, and are licensed and inspected, if they (1) sell animals to exhibitors, dealers, or research facilities, and/or (2) sell wild or exotic animals (as defined by the Regulations). Shops selling "pocket pets" (small exotic pets, such as hedgehogs) are now being licensed as Class "B" dealers and inspected (see AWIC Newsletter Vol. 7 #3-4, p.15).

Regulatory Initiatives (USDA, APHIS, Animal Care Industry Report, Spring 1997)

The following AWA dockets are currently being developed or reviewed:

Notices

- Petition on hunting, security, and breeding dogs from the Doris Day Animal League
- Information Collection: Marine Mammal Facilities
- *Advance Notice of Proposed Rulemaking*
- Handling and Training of Potentially Dangerous Wild and Exotic Animals Used for Exhibition

Proposed Rules

- Perimeter Fencing
- Standards for Animal Auctions
- Exotic Canids and Felids: Minimum Age for Transport
- Standards for Farm Animals
- Standards for Marine Mammals
- User Fees: REAC and Biotechnology, Biologics and Environmental Protection
- Importation of Dead Animals
- Humane Treatment of Dogs and Cats: Licensing and Consignment

Final Rules

- Humane Treatment of Dogs and Cats: Wire Flooring
- Humane Treatment of Dogs and Cats: Tethering
- Humane Treatment of Dogs and Cats: Temperature
- Swim-With-the-Dolphins Human Interactive Programs

USDA's Animal Care Policy Manual Goes Online

The Animal Care policy manual further clarifies the intent of the Animal Welfare Act. The policy manual is available on the WWW at

<http://www.aphis.usda.gov/reac/polman.html>

The policies listed include:

- Policy #1 - Denial of AWA License Applications
- Policy #2 - Submission of Traveling Exhibitor Itinerary
- Policy #3 - Veterinary Care
- Policy #4 - Use of Leased Animals by Licensees
- Policy #5 - Licensing of Exotic Animal Auction Markets
- Policy #6 - Space and Exercise Requirements for Traveling Exhibitors
- Policy #7 - Group classifications for Nonhuman Primates
- Policy #8 - Guidelines for the Confiscation and Destruction of Animals
- Policy #9 - Barrier Facility, SPF Colony Inspection
- Policy #10 - Licensing and Registration of Producers of Antibodies, Sera and/or Other Animal Parts and Pregnant Mare Urine (PMU)
- Policy #11 - Painful/Distressful Procedures
- Policy #12 - Written Narrative for Alternatives to Painful Procedures
- Policy #13 - Microchip Implants
- Policy #14 - Major Survival Surgery, Single vs. Multiple Procedures
- Policy #15 - IACUC membership
- Policy #16 - Dealers Selling Surgically Altered Animals to Research
- Policy #17 - Annual Report for Research Facilities
- Policy #18 - Health Certificate for Dogs, Cats, and Nonhuman Primates
- Policy #19 - Tattoo Identification of Dogs and Cats
- Policy #20 - Identification of Puppies Less than 16 Weeks of Age

APHIS-Animal Care Update

Efforts To Protect Yellowstone Bison Move Forward

Proposals to provide Yellowstone bison with additional winter grazing lands while protecting cattle from the spread of brucellosis were outlined today in a letter to the governor of Montana. (See update on page 19.)

The proposal, put forward by the U.S. Department of Agriculture's Animal and Plant Health Inspection Service and Forest Service, and by the National Park Service, builds upon and further defines the proposals outlined in a similar letter last week.

"This is a very important part of stopping the slaughter of bison in the Greater Yellowstone ecosystem," said Bruce Babbitt, Secretary of the Interior.

Intensive hazing to keep bison in Yellowstone National Park and adjacent Forest System lands, additional bison winter grazing range, and the protection of domestic cattle from transmission of brucellosis remain the principal elements. The potential for bison quarantine facilities was also discussed.

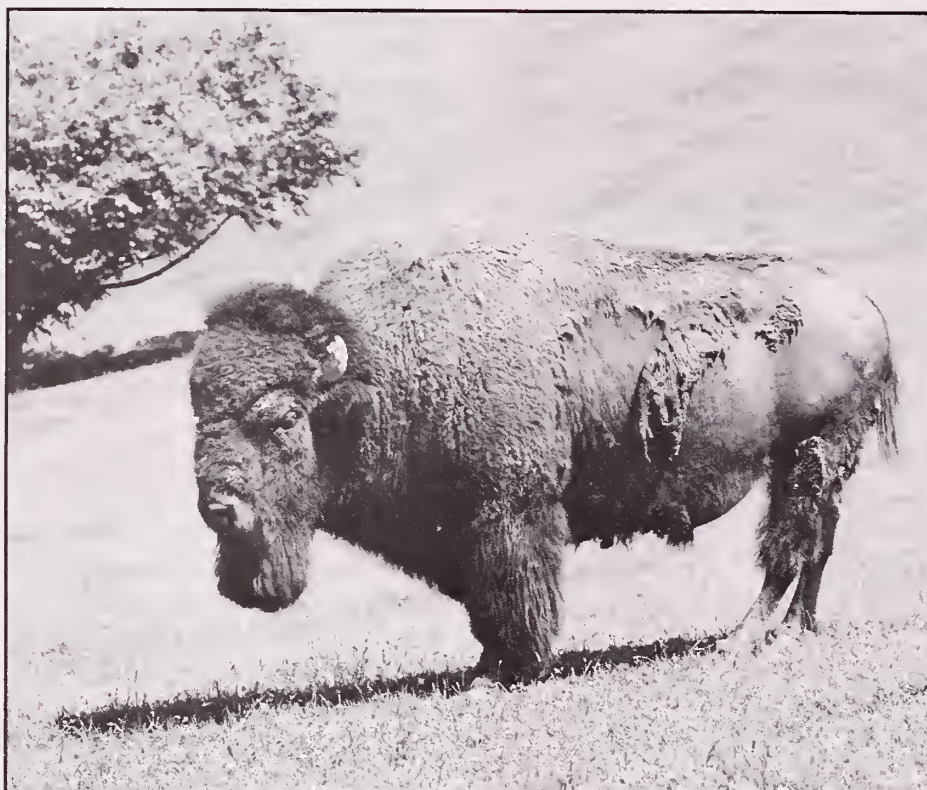
While the measures are designed to alleviate this winter's acute situation, certain elements could serve as the basis for a long-term solution.

The proposal identifies important winter grazing land in the Gallatin National Forest at Horse Butte onto which bison will be allowed. The three agencies have agreed on measures that will permit the bison to winter in this area undisturbed while ensuring that cattle are not exposed to any potential transmission of brucellosis.

"These measures will help get us through the winter and into the spring while protecting cattle from the spread of brucellosis," said Terry L. Medley, administrator of APHIS, a part of USDA's marketing and regulatory programs mission area. "Further, I am optimistic that continued discussions among the involved agencies will lead to agreement and a long-term solution."

"The additional bison winter grazing land will help relieve the difficult situation we are facing this winter," said Mike Dombeck, Forest Service chief. "Further, we are committed to discussing such provisions as part of a long-term solution."

In the letter, the three Federal agencies also reiterated their commitment to continue working together and with the States to develop long-term cooperative efforts to address critical issues. These issues include brucellosis elimination in the Yellowstone ecosystem, providing additional suitable bison winter range outside the park, and encompassing the interests of stakeholders, including Native American tribes.



Courtesy of NAL Special Collections

[Ed. note: For more information, contact APHIS Legislative and Public Affairs at phone (202) 720-2511, Forest Service Public Affairs at phone (202) 205-1760, or the National Park Service Office of Public Affairs at phone (202) 482-6843. General information is available on the APHIS website at www.aphis.usda.gov/oa/bison/brubison.html] ■

Animal Welfare Act Violations and Settlements on the WWW

USDA news releases, program announcements, and media advisories are available on the Internet. Access the APHIS Home Page by pointing your Web browser to <http://www.aphis.usda.gov> and clicking on "APHIS Press Releases." Also, anyone with an e-mail address can sign up to receive APHIS press releases automatically. Send an e-mail message to majordomo@info.aphis.usda.gov and leave the subject blank. In the message, type **subscribe press releases**

If you do not have e-mail access, you may contact the APHIS Legislative and Public Affairs (LPA) offices at:

- Riverdale, Maryland — (301) 734-7799, fax: (301) 734-5221 or write USDA, APHIS, LPA, Unit 49, Suite 4B09, 4700 River Road, Riverdale, MD 20737
- Denver, Colorado — (303) 969-6560 or (303) 784-6238, fax: (303) 969-6973 or (303) 784-6222.
- Riverside, California — (909) 395-8666, fax: (909) 395-8665. ■

APHIS- Animal Care Update

New From Veterinary Services

Guidelines For Importation #1103

Laboratory Mammals: Mice (includes Transgenic and Knockout Mice), Rats, Hamsters, Gerbils, and Guinea Pigs

Background

The U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS) imposes no restrictions on the entry of small laboratory mammals that have not been inoculated with or exposed to infectious agents (this includes the bovine and other transmissible spongiform encephalopathy agents) that affect livestock or poultry.

The U.S. Public Health Service (USPHS) regulates live laboratory animals and should be contacted for their importation requirements. A USPHS permit or letter of authorization can be obtained by contacting the Centers for Disease Control and Prevention, Office of Health and Safety, 1600 Clifton Road, N.E.M.S. F05, Atlanta, GA., 30333, phone: (404) 639-3883, fax: (404) 639-2294.

USDA, APHIS, Plant Protection and Quarantine (PPQ) regulates the importation of plants and other vegetable matter. If the transport cage contains any vegetable matter, such as potatoes or carrots, the importer must contact PPQ Permit Unit at phone (301) 734-6799 to determine if it can be allowed entry. **PROHIBITED VEGETABLE MATTER MUST BE REMOVED FROM THE CAGE AT THE PORT OF ARRIVAL BY A PPQ OFFICER.**

Procedures

Each shipment should be accompanied by a health certificate endorsed by a veterinarian or person responsible for the health of the laboratory animals at the facility of origin. The certificate must indicate that the animals (1) are clinically healthy, (2) have not been exposed to or inoculated with any infectious disease agents that affect livestock or poultry, and (3) have not originated from a facility where work with viruses affecting livestock or poultry is conducted.

This certificate should be available to the U.S. port of arrival officials. Please instruct your shippers to provide this information so that it is easily available for the port inspector's review. **(Do not put the documents INSIDE the shipping container.) (Revised 02/97)**

National Center for Import and Export:
Import/Export Products
4700 River Road Unit 40
Riverdale, MD 20737-1231

USDA Proposes To Amend Animal Welfare Regulations' Fencing Requirements

WASHINGTON, May 5, 1997 – The U.S. Department of Agriculture's Animal and Plant Health Inspection Service is proposing to require that perimeter fencing be placed around outdoor areas of sheltered and outdoor housing facilities for cats, dogs, rabbits, marine mammals, and certain other animals.

"Adding this requirement for these additional categories of animals would serve to protect the safety and well being of the animals," said W. Ron DeHaven, acting deputy administrator for animal care with the Animal and Plant Health Inspection Service, a part of USDA's marketing and regulatory programs mission area.

Although it has been APHIS' policy that such fences should be in place around sheltered and outdoor housing facilities for such animals, there have been no provisions in the regulations requiring their use.

APHIS officials believe that between 90 and 95 percent of the affected businesses already meet the proposed perimeter fence requirement.

This proposed rule is scheduled for publication in the May 6 Federal Register.

To provide input, send an original and three copies of written comments on or before July 7 to Docket number 95-029-1, Regulatory Analysis and Development, PPD, APHIS, Suite 3C03, 4700 River Road Unit 118, Riverdale, MD 20737-1238.

Comments received may be reviewed at USDA, Room 1141 South Building, 14th Street and Independence Avenue, S.W., Washington, D.C., between 8:00 a.m. and 4:30 p.m., Monday through Friday, except holidays. Persons wishing to review comments are requested to call ahead on (202) 690-2817 to facilitate entry into the comment reading room.

NOTE: USDA news releases, program announcements, and media advisories are available on the Internet. Access the APHIS HOME Page by pointing your Web browser to <http://www.aphis.usda.gov> and clicking on "APHIS Press Releases." Also, anyone with an e-mail address can sign up to receive APHIS press releases automatically. Send an e-mail message to majordomo@info.aphis.usda.gov and leave the subject blank. In the message, type subscribe press_releases ■

Legislation cont'd from p.1

pended from the Land and Water Conservation Fund established by Public Law 88-578, for the creation of a new refuge within the National Wildlife Refuge System without specific authorization from Congress pursuant to recommendation from the United States Fish and Wildlife Service, to create that new refuge."

Related bill H.R. 511.

- **H.R. 619 To prohibit the import, export, sale, purchase, possession, transportation, acquisition, and receipt of bear viscera or products that contain or claim to contain bear viscera, and for other purposes.**

Introduced February 5, 1997, by John Porter (R-Illinois) and referred to the Committee on Resources, Committee on International Relations, and the Committee on Ways and Means. Executive comment was requested from the Secretaries of the Interior and Commerce on February 18. On February 24 the bill was referred to the Committee on Asia and the Pacific. This act may be cited as the "Bear Protection Act."

This act prohibits any person from: (1) importing bear viscera into, or exporting it from, the United States; or (2) selling bear viscera, bartering, offering it for sale or barter, purchasing, or possessing it with intent to sell or barter, transporting, acquiring, or receiving it in interstate or foreign commerce. Subjects persons who violate such prohibitions to specified penalties.

Requires the Secretary of the Interior and the United States Trade Representative (USTR) to discuss issues involving such trade with representatives of countries that are the leading importers, exporters, or consumers of such products. Requires the Secretary to report to the

Congress on the progress of efforts to end illegal trade in bear viscera.

Related bill S.263

- **HR 741 To clarify hunting prohibitions and provide for wildlife habitat under the Migratory Bird Treaty Act.**

Introduced February 12, 1997, by Don Young (R-Alaska) and referred to the Committee on Resources. On February 21 it was referred to the Subcommittee on Fisheries Conservation, Wildlife, and Oceans and executive comment was requested from the Secretary of the Interior. This act may be cited as the "Migratory Bird Treaty Reform Act of 1997."

SEC. 3. CLARIFYING HUNTING PROHIBITIONS.

Section 3 of the Migratory Bird Treaty Act (16 U.S.C. 704) is amended as follows: By adding at the end the following: '(b) No person shall take migratory game birds—

'(1) with a trap, snare, net, rifle, pistol, swivel gun, shotgun larger than 10 gauge, punt gun, battery gun, machine gun, fish hook, poison, drug, explosive, or stupefying substance; '(2) with a shotgun of any description capable of holding more than 3 shells, unless it is plugged with a one-piece filler, incapable of removal without disassembling the gun, so that its total capacity does not exceed 3 shells; '(3) from or by means, aid, or use of a sinkbox or any other type of low floating device, having a depression affording a hunter a means of concealment beneath the surface of the water...'

'(c)(1) No person shall take any migratory bird by the aid of baiting, or on or over any baited area, where that person knows or should have known through the exercise of reasonable diligence that bait was present.

'(2) Nothing in this subsection shall prohibit— '(A) the taking of all migratory game birds, including waterfowl, on or over standing crops, flooded standing crops (including aquatics), flooded harvested croplands, grain crops properly shocked on the field where grown, or grains found scattered solely as the result of normal agricultural planting or harvesting; or, '(B) the taking of all migratory game birds, except waterfowl, on or over any lands where shelled, shucked, or unshucked corn, wheat or other grain, salt, or other feed has been distributed or scattered as a result of normal agricultural operations or as a result of manipulation of a crop or other feed on the land where grown for wildlife management purposes.

'(3) As used in this subsection: '(A) The term 'baiting' means the intentional placing, exposing, depositing, distributing, or scattering of shelled, shucked, or unshucked corn, wheat or other grain, salt, or other feed that constitutes for such birds an attraction, on or over any areas where hunters are attempting to take migratory game birds. '(B) The term 'baited area' means any area where shelled, shucked, or unshucked corn, wheat or other grain, salt, or other feed whatsoever capable of attracting migratory game birds is intentionally placed, exposed, deposited, distributed, or scattered; such an area shall remain a baited area for 10 days following complete removal of all such corn, wheat or other grain, salt, or other feed."

- **S. 361 To amend the Endangered Species Act of 1973 to prohibit the sale, import, and export of products labeled as containing endangered species, and for other purposes.**

Introduced on February 26, 1997, by James Jeffords (R-Vermont) and referred to the Committee on the Environment and Public Works.

The ESA is amended to prohibit the import of any product labeled as containing any species of fish, wildlife, or plants listed in Appendix I to the Convention (CITES), or export any such product from, the United States.

- **H Joint Resolution 59 To disapprove a rule affecting polar bear trophies from Canada under the 1994 amendments to the Marine Mammal Protection Act issued by the United States Fish and Wildlife Service of the Department of the Interior.**

Introduced on March 4, 1997, by Don Young (R-Alaska) and referred to the Committee on Resources. On March 6, executive comment was requested from the Secretary of the Interior.

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, that Congress disapproves the rule submitted by the United States Fish and Wildlife Service of the Department of the Interior relating to polar bear trophies from Canada under the 1994 amendments to the Marine Mammal Protection Act, and such rule shall have no force or effect. [Ed. note: On April 30, 1994, the Marine Mammal Protection Act (Act) was amended to allow the issuance of permits to import sport-hunted trophies of polar bears (*Ursus maritimus*) (excluding internal organs) legally taken by the applicant while hunting in Canada, provided certain findings have been made by the U.S. Fish and Wildlife Service. These permits may also authorize the importation of polar bears taken, but not imported, prior to enactment of the Amendments, provided certain conditions are met.]

● H.R. 923 To prohibit the cloning of humans

Introduced on March 5, 1997, by Vern Ehlers (R-Michigan) and referred to the Committee on Commerce. On March 14, it was referred to the Subcommittee on Health and Environment. This act may be cited as the "Human Cloning Prohibition Act."

(a) In General — It shall be unlawful for any person to use a somatic cell for the process of producing a human clone. (b) Any person who violates subsection (a) is liable to the United States for a civil penalty not to exceed \$5,000.

Related bills H.R. 922, S. 368

● HR 952 To clarify the mission, purposes, and authorized uses of the National Wildlife Refuge System, and to establish requirements for administration and conservation planning for that system.

Introduced March 5, 1997, by George Miller (R-California) and referred to the Committee on Resources. On March 14, executive comment was requested from the Secretary of the Interior and the bill was referred to the Subcommittee on Fisheries Conservation, Wildlife, and Oceans. This act may be cited as the "Theodore Roosevelt Wildlife Legacy Act of 1997."

SEC. 2. MISSION AND PURPOSES OF THE SYSTEM.

(a) MISSION — The overall mission of the National Wildlife Refuge System (in this Act referred to as the "System") is to preserve a network of lands and waters for the conservation and management of fish, wildlife, and plants of the United States for the benefit of present and future generations.

(b) PURPOSES — The purposes of the System are — (1) to conserve, manage, and where appropriate, restore fish and wildlife habitats so as to provide, in perpetuity, for the diversity of fish, wildlife, and plants and the ecological processes that sustain them; (2) to provide a diverse national network of lands and waters designed to conserve and manage, in perpetuity, fish, wildlife, and plants of the United States, and their habitats; (3) to conserve and manage migratory birds, endangered species, anadromous or interjurisdictional fish species, marine mammals, and other fish, wildlife, and plants; and (4) to fulfill international treaty obligations of the United States with respect to fish, wildlife, and plants, and their habitats.

SEC. 3. PRIORITY USES.

The priority public uses of the System are wildlife observation and photography, hunting, fishing, and environmental education and interpretation.

SEC. 4. ADMINISTRATION OF THE SYSTEM.

In administering the System, the Secretary of the Interior shall — (1) ensure that the mission and purposes of the System described in section 2 and the purposes of each refuge are carried out, except that if a conflict exists between the primary purpose of a National Wildlife Refuge and any purpose of the System, the conflict shall be resolved in a manner that first fulfills the primary purpose of the refuge, and, to the extent practicable, also achieves the purposes of the System; (2) ensure that opportunities for the uses described in section 3 receive priority attention in planning and management within the System, consistent with the mission and purposes of the System described in sections 2(a) and (b); (3) plan, propose, and direct expansion of the System — (A) to accomplish the mission and purposes of the System and the purposes of each National Wildlife Refuge; and (B)

to contribute to the conservation of the ecosystems of the United States; and (4) inventory and monitor the status and trends of fish, wildlife, and plants in each National Wildlife Refuge.

SEC. 5. COMPATIBILITY STANDARDS AND PROCEDURES.

(a) GENERAL RULE — Except as provided in subsection (b), effective beginning on the date that is 3 years after the date of enactment of this Act, the Secretary shall not initiate or permit a new use of a National Wildlife Refuge or expand, renew, or extend an existing allowed use unless the Secretary determines that the use is compatible with the primary purposes of the refuge and the mission and purposes of the System specified in section 2 of this Act. Such determinations shall — (1) be made in writing, be based on the best available scientific information, and represent the best professional judgment of the refuge officer involved; (2) be made after an opportunity has been provided for the public to review and comment on the evaluations; (3) where appropriate, be made concurrently with the development of a conservation plan for the refuge under section 6; and (4) be reevaluated when conditions under which the use is permitted change significantly or when there is significant new information regarding the effects of the use, but not less frequently than every 10 years.

(b) PRIOR IDENTIFICATION FOR NEW ACQUISITIONS — On lands added to the System after the date of enactment of this Act, the Secretary shall identify, prior to acquisition, existing compatible priority public uses (as described in section 3) that shall be permitted to continue on an interim basis pending completion of comprehensive planning.

SEC. 6. REFUGE CONSERVATION PLANNING PROGRAM.

(a) GENERAL RULE — Except with respect to National Wildlife Refuge lands in Alaska (which shall be governed by the refuge planning provision of the Alaska National Interest Lands Conservation Act (16 U.S.C. 3101 et seq.)), the Secretary shall — (1) propose a comprehensive conservation plan for each refuge or ecologically related complex of refuges consistent with section 2 of this Act within 15 years after the date of enactment of this Act and revise such plans not less frequently than every 15 years thereafter; (2) develop and implement a process to ensure an opportunity for active public involvement in the preparation and revision of conservation plans; and (3) manage each refuge in a manner consistent with the conservation plan for the refuge. (b) NEW REFUGES — With respect to any refuge established after the date of enactment of this Act, the Secretary shall prepare a conservation plan for the refuge not later than 2 years after the Secretary has determined that sufficient land has been acquired to warrant comprehensive planning.

To find out the status of these or any other bills, contact the congressional bill status line at (202) 225-1772. This information is also available on the World Wide Web at <http://thomas.loc.gov/bss/d105query.html> ■

Announcements...

● 44th Annual Pathology of Laboratory Animals (POLA) and Third Annual Current Laboratory Animal Science Seminar (CLASS)

The POLA course is designed primarily for people who are responsible for recognition and interpretation of lesions in laboratory animals. It is intended to help attendees interpret spontaneous diseases that might affect experimental results or alter the health of laboratory animals. Pathology will receive major emphasis in the course, but other features of diseases such as etiology, diagnosis, and control will also be examined. The course will encompass a wide range of diseases including neoplastic, iatrogenic, and infectious diseases in a variety of species. The class will be held on August 11-14, 1997.

The CLASS course provides an intensive and comprehensive review of selected topics in laboratory animal science and medicine. The course includes lectures on animal models, research methods, animal medicine and surgery, emerging diseases, occupational health issues, regulations, laws and guidelines, alternatives to laboratory animals, and facility management. The first day of this seminar overlaps the fourth day of the POLA. This class will be held on August 14-15, 1997.

These course will be held at the William H. Natcher Conference Center, National Institutes of Health, Bethesda, Maryland. For further information, please contact Lawrence Austin, Department of Education Services, Armed Forces Institute of Pathology, Washington, DC 20306-6000, phone: (800) 577-3749 (U.S. only), (202) 782-5021, fax: (202) 782-7164, e-mail: came@email.afip.osd.mil, website <http://www.afip.mil>

● National Capital Area Branch-American Association for Laboratory Animal Science

The 24th Annual NCAB-AALAS Seminar will be held at Turf Valley Hotel and Country Club in Ellicott City, Maryland, on September 10-11, 1997. This year's seminar is entitled **Future Vision: Laboratory Animal Science – The Next Generation**. A variety of innovative and informative sessions are being offered relating to how current events will affect future research and our own personal lives and careers in the next century.

A workshop is planned for September 9, 1997, on *Rodent Rederivation and Necropsy Techniques*. Rosemarie Hunziker and Georgina Miller are workshop chairpersons. This full-day workshop will cost \$45 for NCAB members and \$60 for non-members. Lunch is included.

The 1997 general registration fees are \$55 for 1 day or \$90 for 2 days for NCAB members; \$70 for 1 day and \$105 for 2 days for non-members. For additional information, please contact James Raber at phone: (301) 402-3909, fax: (301) 402-0035, or Larry Cunnick at phone: (301) 417-0806, fax: (301) 417-9238.

● Mechanisms of Toxicity

This program is designed to explore the biological mechanisms involved in cellular function and to identify methods to evaluate these mechanisms as well as chemical ef-

fects on them. The symposium is co-sponsored by the Johns Hopkins Center for Alternatives to Animal Testing (CAAT) and the Industrial In-Vitro Toxicology Group and will be held at the Johns Hopkins Medical Institutions in Baltimore, Maryland, on September 7-10, 1997. For additional information contact Office of Continuing Medical Education, Johns Hopkins Medical Institutions, Turner 20, 720 Rutland Avenue, Baltimore, MD 21205-2195 USA, phone: (410) 955-2959, fax: (410) 955-0807, or e-mail: cmenet@som.adm.jhu.edu

● ANZCCART/NAEAC Conference

The Australian and New Zealand Council for the Care of Animals in Research and Teaching and the National Animal Ethics Advisory Council will be sponsoring a 2-day conference on **Ethical Approaches to Animal-Based Science** on September 19-20, 1997, in Auckland, New Zealand.

This conference will be valuable to anyone interested in the place of ethics in science. Animal-based scientists, including researchers, teachers, and students, will find it particularly relevant, as will all others concerned about animal welfare, emerging environmental pressures as they affect animal welfare, the effectiveness of animal ethics committees, and the promotion of humane practices in the use of animals in science. The 3Rs – reduce, refine, and replace – as principles that minimize the number of animals used and the pain or suffering they may experience, will be given prominence throughout the program, in view of their central place in providing credibility to harm-benefit arguments advanced to support specific uses of animals in research and teaching.

The cost for registration is NZ \$180 (about US \$130) before June 30, 1997;

NZ \$210 (about US \$150) after. For more information or to register contact Ms. Gill Sutherland, ANZCCART, P.O. Box 598, Wellington, New Zealand, phone: + 64-4-4727421, fax: + 64-4-4731841, e-mail: anzccart@rsnz.govt.nz

● Scientists Center for Animal Welfare (SCAW) and University of Texas Health Science Center Co-sponsor Annual Conference

The conference "Hot Topics for Animal Care and Use Committees" will be held December 11-12, 1997 in San Antonio, TX. For additional information contact SCAW, 7833 Walker Drive, Suite 340, Greenbelt, MD 20770, phone: (301) 345-3500, fax: (301) 345-3503, e-mail: scaw@erols.com.

– The Well-Being of Animals in Zoo and Aquarium Sponsored Research

This publication contains chapters on diversity of research in zoos and aquariums, ethical considerations for conservation research, trends in environmental enrichment, role of the IACUC at zoos and aquariums, and the veterinarians role in protocol review. The cost of the publication is \$50 and is available from SCAW at the above address.

● **New From the Universities Federation for Animal Welfare (UFAW)**

For more information or to order any of the publications below, contact UFAW, 8 Hamilton Close, South Mimms, Potters Bar, Herts EN6 3QD United Kingdom, phone: 01707 658202, fax: 01707 649279.

– **Noise in Dog Kennelling (Animal Welfare Report No. 9, ISSN 0956-1137) 39 pp.**

The design of dog kennels should meet the behavioral and physical needs of dogs. However, the level of noise within some kennels can damage human hearing. Dogs are more sensitive than humans to sound and can hear sounds that are up to four times quieter than the human ear can detect. However, the possibility that the noise might have similar effects on dogs has not previously been considered.

In this report, data are presented on day and night sound levels throughout the hearing range of the dog in a variety of dog housing facilities, an analysis of the causes of noise and, housing and husbandry systems that accentuate or ameliorate noise problems. Recommendations are provided on ways of reducing noise, in new and existing facilities, through the use of sound absorbing materials, building design, and husbandry techniques. The cost is £5 or US \$10 post free from UFAW. Review copies are available for journals and newsletters. Contact Robert Hubrecht or Vicky Taylor.

– **The Exploitation of Mammal Populations (ISBN 0-412-64420-7) 415 pp.**

This book presents a selection of peer-reviewed and edited papers from a conference jointly sponsored by UFAW and the Mammal Society that includes contributions from an international array of wildlife biologists, ecologists, and conservationists. In 22 chapters the issues involved in harvesting, hunting, sustainable trade, and ecotourism are explored and set in a context of past and present mammal exploitation. The resulting volume provides a stimulating and wide-ranging review of current attitudes to mammal exploitation that will be of interest to zoologists, ecologists, animal behaviorists, wildlife managers, conservation biologists, and campaigners. Review copies are available from the U.K. offices of Chapman & Hall at phone: 0171865 0066. The cost for this book is £39.50 or US \$80. Postage outside Europe will be invoiced separately.

● **New Training Program on Operating Animal Shelters**

Animal shelters will soon have people specifically trained to supervise and operate both public and private shelters, thanks to a new spring program being offered at LaGuardia Community College in Queens, New York. The 6-week course is offered through the Veterinary Technician Program and includes animal control roles and duties, Federal, State, and local regulations, animal shelter policy and design, intake and release of animals (domestic, exotic, and farm), capture, and restraint. For more information, call John Salig at (516) 796-0564 or e-mail: SALIGSEVEN@msn.com

● **The Laboratory Rabbit (ISBN 0-8493-2561-7)**

The humane care and management of rabbits used in research is an ongoing concern. This guide was created especially for individuals performing research with rabbits whose duties include animal facility management, animal husbandry, regulatory compliance, and technical procedures. Among the many features of this book are references to alternative procedures and methods and sources and suppliers of rabbits, feed,

Care and Use of Laboratory Animals Training Courses

During 1997, Renaissance Research Associates will be conducting three multimedia short courses designed to fulfill the training requirements of the Animal Welfare Act. All participants will receive a certificate and course manual. The course will cover:

- humane methods of animal care and use and handling and procedural techniques, with the emphasis on species covered by the Animal Welfare Act;
- concepts, availability, and use of research or testing methods limiting animal use and minimizing distress;
- adequate veterinary care and proper use of anesthetics, analgesics, and tranquilizers;
- reporting deficiencies in animal care programs;
- accessing information resources and services at the Animal Welfare Information Center and the National Agricultural Library;
- animal care and use committee functions including an interactive "IACUC Meeting Session;"
- environmental enrichment ;
- internet resources and;
- zoonoses and other occupational health issues.

The meetings will be held in the following locations:

August 18 — Valley Forge Marriott Suites
888 Chesterbrook Boulevard
Wayne, PA

September 8 — Radisson Governor's Inn
Highway 54 and Interstate 40
Research Triangle Park, NC

October 13 — Marriott Courtyard Hotel
9650 Scranton Road
LaJolla, CA

For more information or to register, contact Linda Panepinto, Renaissance Research Associates, P.O. Box 191, Masonville, CO 80541, phone: (970) 226-4865, fax: (970) 226-4042, e-mail: LPanpinto@aol.com ■

sanitation supplies, cages, and research and veterinary supplies. It also provides detailed information on the humane care and management of rabbits in the laboratory, including environmental enrichment ideas. This book is available from CRC Press, 200 Corporated Blvd., N.W., Boca Raton, FL 33431-9868, phone: (800) 272-7737 (U.S. only) or (407) 994-0555 (international customers or within Florida), fax: (800) 374-3401 (U.S. only), e-mail: orders@crcpress.com The cost is US \$39.95 plus postage (\$5 within U.S. or US \$10 international). Other titles will be available in 1997 and 1998.

● **SimNerv – The Virtual Electrophysiology Laboratory**

SimNerv is an interactive multimedia simulation of the classic frog nerve experiment. This experiment serves as an introduction to the basic elements of electrophysiology by allowing students to observe the reaction of the *nervus ischiadicus* to different stimuli and stimuli sequences and draw conclusions regarding the basic properties of nerves. Video clips of a complete dissection of the *nervus ischiadicus* from decapitation to nerve excision can be observed, so that the student can obtain a full understanding of the detailed procedures involved in preparing the frog for experiments. Using realistic, fully adjustable on-screen laboratory equipment, any combination of parameter adjustments can be made by the student and applied to the nerve. Switches, sliders, and dials are all adjustable with the click of the mouse, and experiments may be carried out in any order.

Among the experiments that can be carried out are determination of conduction velocity, construction of strength-duration diagrams, determination of absolute and relative refractory periods, anodic and cathodic excitability, and determination of chronaxy and rheobase response to ligature of the nerve. For additional information, contact Medical Multimedia Systems, 1247 East 70th Street, Brooklyn, NY 11234, phone: (800) 769-7799 (U.S. only) or (718) 444-7763, e-mail: medmult@aol.com,

WWW: <http://www.webcom.com/medmult>

● **Available on the World Wide Web**

- **Consultant-A Veterinary Diagnostic Support Program**
<http://www.vet.cornell.edu/consultant/consult.asp>

Cornell University announces the availability of its diagnostic support program that allows users to search for diagnoses based on one or more symptoms.

- **Universities Federation for Animal Welfare**
<http://www.users.dircon.co.uk/~ufaw3/>

Contains information on grants, publications, news, and subscription information or submission of articles to the journal *Animal Welfare*.

- **Emerging Disease Information**

<http://www.outbreak.org/cgi-unreg/dynaserve.exe/index.html>

Outbreak is an online information service addressing emerging diseases. The site provides in-depth coverage of Ebola, BSE/CJD, dengue, hantavirus, malaria, plague, and yellow fever. The site also tracks active outbreaks and provides information on historical outbreaks of these diseases.

- **NIH Cost Analysis and Rate Setting Manual**
<http://www.ncrr.nih.gov/cost/costman.htm>

A draft of the revised manual has been posted for your comments.

- **Federally Funded Research in the United States**
<http://cos.gdb.org/best/fed-fund.html>

This site is provided by the Community of Science database and provides a means of searching for information related to projects funded by the National Institutes of Health, National Science Foundation, small business grants, U.S. Department of Agriculture, and the U.S. Department of Commerce.

WARDS and SCAW to Sponsor Seminar at AALAS National Meeting

Working for Animals used in Research, Drugs and Surgery (WARDS) and the Scientists Center for Animal Welfare (SCAW) will sponsor "Advances in Refinement Techniques for Laboratory Animals" on November 17, 1997, during the week-long American Association for Laboratory Animal Science (AALAS) national meeting in Anaheim, California.

"One of our major objectives this year has been to promote the refinement process in animal care," WARDS Executive Vice President Joseph Venable said. "By joining forces with SCAW, WARDS will bring together some of the world's leaders in the refinement field which will guarantee an informative and exciting seminar."

The morning seminar will offer a historical overview of refinement issues and focus on current trends in laboratory research aimed at minimizing animal pain and distress. Speaking on refinement techniques and trends will be 1996 WARDS Refinement Project recipient Paul A. Flecknell, MA, VetMB, PhD, DLAS, MRCVS, Director, Comparative Biology Centre, The University of Newcastle (UK). Other confirmed presenters include: Andrew Rowan, PhD, Senior Vice President, Humane Society of the United States; DeWayne H. Walker, DVM, Manager, Lab Animal Research Services, 3M Corporation; and James A. Love, Director, Animal Care Centre, University of British Columbia.

For further information and a copy of the final program, contact WARDS or SCAW Executive Director Lee Krulisch at 301-345-3500 or scaw@erols.com

– **Cattlemen on the Hill**

<http://www.beef.org/hill>

This site is maintained by the National Cattlemen's Beef Association and contains information on legislative actions affecting beef producers. It also contains information on beef safety, cattle health and well-being, etc.

– **Animal Welfare Institute**

<http://www.animalwelfare.com>

This is the web site of the Animal Welfare Institute in Washington, D.C. It contains information on programs of AWI, subscription information to its magazine, and other information on the welfare of laboratory animals, farm animals, and wildlife; use of steel-jawed leghold traps; etc.

– **Animal Industry Foundation**

<http://www.aif.org/index.htm>

This site is used to educate consumers about U.S. animal agriculture and its contributions to the public's quality of life. Background information on other programs sponsored by AIF is also available.

– **ProMED Update**

In *Animal Welfare Information Center Newsletter*, Winter 1996/1997 (7(3-4):21), two web sites were given to access ProMED-mail (Program for Monitoring Emerging Diseases). The global electronic conference receives and publishes time-

Montana, Federal Officials Agree on Yellowstone Bison Management

Washington, June 20, 1997 – Federal agencies and the state of Montana have agreed upon an approach to manage brucellosis in the Yellowstone bison population.

The agreement reached between the state of Montana, the National Park Service, the U.S. Forest Service, and APHIS achieves the purpose statement agreed upon by the parties, which is "to maintain a wild free-ranging population of bison and address the risk of brucellosis transmission to protect the economic viability of livestock interests in Montana."

State and Federal officials met this week to discuss an environmental impact statement (EIS) for management of the Yellowstone bison herd, and agreed upon a "preferred alternative," which included the following:

- capture and shipment to quarantine of animals testing negative. Those animals would then be made available to American Indian tribes to help establish herds.
- capture of bison to control movement onto private lands.
- bison hunting in certain situations.
- vaccination of bison when a vaccine is developed.

The draft EIS, which will detail the "preferred alternative" and other options for managing the brucellosis threat and the Yellowstone bison herd, will be released for public comment later this summer.

Available from the National Institutes of Health Website

The following laboratory animal welfare materials are available on the WWW site at the National Institutes of Health, Office for Protection from Research Risks (OPRR). OPRR is responsible for assuring compliance with the *Guide to the Care and Use of Laboratory Animals* by those institutions receiving Federal funding from the Public Health Service. The address is

http://www.nih.gov:80/grants/oprr/library_animal.htm

OPRR Document Library-Laboratory Animal Welfare

- 1996 Guide for the Care and Use of Laboratory Animals, National Academy of Sciences. Note: The Guide resides on a server outside the NIH. The NIH is not responsible for the accuracy or content of this document.
- Institutional Animal Care And Use Committee Guidebook, ARENA (Applied Research Ethics National Association). Note: The ARENA Guidebook resides on a server outside the NIH. The NIH is not responsible for the accuracy or content of this document.
- Public Health Service Policy on Humane Care and Use of Laboratory Animals, March 1996
- Domestic Institutions Holding Animal Welfare Assurances on File With OPRR
- Memorandum of Understanding Among USDA, NIH, and FDA Concerning Animal Welfare
- Health Research Extension Act of 1985, Public Law 99-158, November 20, 1985, Section 495, "Animals in Research"

OPRR Reports - Laboratory Animals

- Oct 1, 1996: Electronic Availability of Animal Welfare Documents
- July 31, 1996: Implementation of the 1996 revision of the Guide for the Care and Use of Laboratory Animals
- Jan 26, 1996: Revision of the Guide for the Care and Use of Laboratory Animals
- March 8, 1995: Sources of Custom Antibody
- Jan 14, 1994: Information and Clarification in the Area of Animal Welfare-related Annual Reporting Requirements
- Jan 12, 1994: Information and Clarification in the Area of Animal Welfare-related Prompt Reporting Requirements
- Jan 11, 1994: A Recommendation to All Institutions Conducting Animal-related Activities Supported by the U.S. Public Health Service (USPHS)
- 1990: Assistance to Your Institution in Complying With Reporting Requirements of the USPHS Policy
- May 21, 1990: Protocol Review by Institutional Animal Care and Use Committees (IACUC's)

Published Articles Authored by the OPRR Division of Animal Welfare

- Use of electronic communications for IACUC functions. *ILAR Journal* 37(4):190-192, 1995.
- Model for performing institutional animal care and use committee continuing review of animal research. *Contemporary Topics* 35(5):53-56, 1996.

Questions and comments about the OPRR document library should be e-mailed to: oprr@od6100m1.od.nih.gov ■

Grants, Internships...

● ACLAM Foundation

The American College of Laboratory Animal Medicine (ACLAM) Foundation is soliciting proposals for research funding in the area of laboratory animal science and medicine. The deadline for pre-proposals is August 1, 1997, with initial one-year awards granted by January 1, 1998. About \$30,000 will be awarded. In 1997 the Foundation expects to focus its funding in the following five areas: analgesia/anes-thesia, animal behavior/well-being, diagnostics/diseases of laboratory animals, laboratory animal husbandry, and toxicology issues.

The pre-proposal research plan, not to exceed two pages, must include a working title for the project, objectives of the research, an outline of the experimental design, time span for the study, total budget requirements, name of the principal investigator, and name of the institution where the research will be conducted. Fifteen copies of the pre-proposal must be received by August 1, 1997, by the Foundation chairperson. Requests for full proposals will be sent to selected applicants before September 15, 1997.

For additional information, please address correspondence and pre-proposals to Martin Morin, D.V.M., ACLAM Foundation, P.O. Box 103, Chestertown, MD 21620 USA, phone: (410) 810-1869, fax: (410) 810-1870, e-mail: morinasc@skipjack.bluecrab.org

● Prince Laurant Foundation Prize

The Prince Laurant Foundation for welfare of domestic and wild animals, wishes to undertake various initiatives to further the appreciation and respect for the dignity of animals, regardless of the species and irrespective of the role humans have assigned them. This year the prize will be awarded to a scientific investigation or action that has significantly contributed to the improvement of animal welfare. The prize of 500,000 Belgian francs will be awarded to a person or a team working in Belgium or abroad, and the selection will be carried out by a jury of national and international experts. Submissions for the prize must be presented not later than September 30, 1997, to the Prince Laurant Foundation Prize, North Plaza Building, E. Jacqmainlaan 157, 1210 Brussels, Belgium. For more information contact, phone: +32 2 204 01 97, fax: +32 2 204 01 99. Copies of the prize regulations/guidelines for submission are available from AWIC.

● Hastings Center Programs

Student Intern Program

The Center has a research program in several fields, including biomedical and environmental ethics, and studies ethical and philosophical issues relating to organ transplantation, law, science, animal welfare, etc. The intern's research must be in an area of bioethical issues, and prior training in the field is required.

International Biomedical Ethics Research Program

This program is designed for advanced scholars and medical professionals who have made or will make significant contributions to bioethics in their countries.

Journalist-in-Residence Program

Journalists covering medical and scientific issues are provided the opportunity to perform research on topics of interest to their readers. The internship typically lasts for not longer than 1 month.

Visiting Scholar Program

Professional in the academic, biomedical, or legal fields performs independent research on ethical issues in medicine, biosciences, and related fields. The typical stay at the Center is 2 weeks to 1 month.

For more information about the center's programs, contact Strachan Donnelley, Director of Education, Hastings Center, 255 Elm Rd., Briarcliff Manor, NY 10510, phone: (914) 762-8500, fax: (914) 762-2124.

● International Program for Animal Alternatives

The Procter and Gamble Company supports research for development of new technologies that will replace or reduce the numbers of animals or reduce the distress imposed on animals currently used in testing the safety and efficacy of drugs and consumer products. Three grants will be awarded. The maximum award will be \$50,000 annually for up to 3 years. The deadline for submission of proposals is August 15, 1997. For additional information, please contact the Program Administrator, International Program for Animal Alternatives, Procter and Gamble Company, Miami Valley Laboratories, P.O. Box 538707, Cincinnati, OH 45253-8707 USA, fax: (513) 627-1153.

● SmithKline Beecham Grants

SmithKline Beecham provides support to organizations located near areas where SKB has corporate locations. Among the programs that are funded are animals for use as assistants or in therapy, canine companions for disabled individuals, etc. For more information, contact Director, Corporate Responsibility Programs, SmithKline Beecham, P.O. Box 7929, 1 Franklin Plaza, FP2130, Philadelphia, PA 19101-7929.

● New York Zoological Society/Wildlife Conservation Society Research Grants

These grants are for research or programs concerned with the conservation of endangered or threatened wildlife and habitats. Each project must have a specific conservation component. The maximum award is \$20,000. The deadline for receipt of proposals is October 1, 1997. For more information,

contact Research Fellowship Coordinator, NYZS/Wildlife Conservation Society, 185th Street & Southern Boulevard, Bronx, NY 10460, phone: (718) 220-5896, fax: (718) 364-4275, e-mail: fellowship.wcs@mcimail.com

● **Laboratory Animal Sciences Small Grants Program**

This is a 1-year, nonrenewable award to provide support for pilot projects, testing of new techniques, or feasibility studies that may provide the foundation for more extensive work. Among the areas of study to be considered are methods to decrease pain and distress to laboratory animals and optimal housing requirements. The maximum award is \$25,000. Deadline for receipt of proposals is October 1, 1997. For more information, contact Director, Comparative Medicine Program, NCRR, 5333 Westbard Avenue, Westwood Building, Bethesda, MD 20892, phone: (301) 435-0744, or (301) 435-0844, website <http://www.ncrr.nih.gov>

● **Research Methods Development Grants Promoting No Use or Less Use of Animals**

The National Institutes of Health invites grant applications for investigations into research methods that do not use animals, use fewer animals, or produce less pain and distress in animals in research. Grant applications are requested for projects that will increase the extent and depth of knowledge needed to develop methods of biomedical research that do not require the use of vertebrate animals; reduce the number of vertebrate animals used in research; produce less pain and distress in vertebrate animals than methods currently used; validate or demonstrate the reliability of nonanimal methods; and/or expand nonvertebrate animal research methods that have been found valid and reliable. The support mechanism for this program will be the traditional investigator-initiated research project grant under which the applicant will plan, direct, and carry out the research program. Support will be provided for up to 5 years, renewable. Applicants are encouraged to contact the National Center for Research Resources (NCRR) prior to submitting an application. The deadline for receipt of proposals is October 1, 1997. For more information, contact Director, Comparative Medicine Program, NCRR, 5333 Westbard Avenue, Westwood Building, Bethesda, MD 20892, phone: (301) 435-0744, or (301) 435-0844, website <http://www.ncrr.nih.gov>

● **Fulbright Opportunities for U.S. and Non-U.S. Professionals**

These grants are excellent professional development opportunities and provide funding to pursue professional interests abroad. Non-U.S. candidates apply in their home country for awards to study in the United States. U.S. candidates have an August 1, 1997, deadline. Opportunities exist in every area of the social sciences, arts and humanities, sciences, and many professional fields. Fulbright grants include undergraduate and graduate teaching, individual advanced research, joint research collaboration, and more. For additional information, contact the U.S. Information Agency Fulbright Senior Scholar Program, Council for International Exchange of Scholars,

Box INET, 3007 Tilden St., NW, Suite 5M, Washington, DC 20008-3009, USA, phone: (202) 686-7877, e-mail: cies1@cies-net.cies.org, website <http://www.cies.org>

Non-U.S. candidates must contact the Fulbright commission or United States embassy in their home country to apply for grants in the United States. ■

VETBASE Database on Drug Dosages

Vetbase (ISBN 90-803346-2-6) is a database of veterinary dosages for non-antibiotic drugs. The database, compiled by J.D. Kuiper, Ph.D. and H.J. Kuiper, Ph.D. at Utrecht University, contains information on more than 800 drugs for use in over 130 animal species including all laboratory and farm animals, birds, zoo animals, fish, amphibians, and reptiles. The database lists more than 12,000 dosages with over 4,500 of these for pain and anesthesia. Vetbase is easy to search using built-in search commands. The user picks the species of interest and can then search for information based on a specific drug (ketamine, ivermectin, etc.) or pharmaceutical class (anesthetics, analgesics, anthelmintics, etc.) and, if desired, route of administration. The information that is retrieved includes the drug name, dosage(s), route of administration, notes on use, and literature references.

The extrapolation routine of Vetbase can be used in case there is no dosage listed for a particular species. The routine is based on Kleibers law and converts a specific dose and dosing interval to the dose for another animal.

The classification of the drugs in Vetbase is an adapted version of the Anatomical Therapeutic Classification System for veterinary pharmaceuticals. The first level of this classification is anatomical (site of action), the second level is according to the therapeutic and chemical characteristics

System requirements are: Windows 3.1 or Windows 95, 15 Mb free space on the hard disk, Intel 386 microprocessor and 520 K RAM.

The cost is US \$225.

For more information or to order, contact Hajeka Informatie & Advies, Graafschap 7, 3524 TL Utrecht, The Netherlands, or fax: +31 30 289 42 51.

A demo version will be available at <http://oslovet.veths.no/databasesintro.html#Vetbase>

Validation and Regulatory Acceptance of Toxicological Test Methods: A Report of the Ad Hoc Interagency Coordinating Committee on the Validation of Alternative Methods, Now Available

**Federal Register: March 13, 1997
(Volume 62, Number 49)]**

Page 11901-11902 From the Federal Register Online via
GPO Access [wais.access.gpo.gov][DOCID:fr13mr97-93]
Department Of Health And Human Services
Public Health Service
National Institute of Environmental Health Sciences;

The publication Validation and Regulatory Acceptance of Toxicological Test Methods: A Report of the Ad Hoc Interagency Coordinating Committee on the Validation of Alternative Methods, NIH Publication 97-3981 is now available and may be obtained as described in this notice.

Background

The National Institutes of Health Revitalization Act of 1993 (Pub. L. 103-43, Section 1301) directed the National Institute of Environmental Health Sciences of the National Institutes of Health (NIEHS/NIH) to "(a) establish criteria for the validation and regulatory acceptance of alternative testing methods, and (b) recommend a process through which scientifically validated alternative methods can be accepted for regulatory use" (appendix F).

In response to these mandates, NIEHS established an ad hoc Interagency Coordinating Committee on the Validation of Alternative Methods (ICCVAM) (the Committee) in 1994 to develop a report recommending criteria and processes for validation and regulatory acceptance of toxicological testing methods that would be useful to Federal agencies and the scientific community. The following Federal regulatory and research agencies and organizations participated in this effort:

- Consumer Product Safety Commission
- Department of Agriculture
 - Agricultural Research Service
 - Animal and Plant Health Inspection Service
- Department of Defense
- Department of Energy
- Department of Health and Human Services
 - Agency for Toxic Substances and Disease Registry
 - Food and Drug Administration
 - National Institute for Occupational Safety and Health/CDC
 - National Institutes of Health
 - National Cancer Institute
 - National Institute of Environmental Health Sciences
 - National Library of Medicine
 - Office of Laboratory Animal Research
- Department of the Interior
- Department of Labor
 - Occupational Safety and Health Administration
- Department of Transportation
 - Research and Special Programs Administration
- Environmental Protection Agency

The Committee met initially in September 1994 and then monthly or bimonthly until completion of the report in October 1996. The Committee interpreted its charge as the development of general criteria and processes for the valida-

tion and regulatory acceptance of new and revised toxicological test methods.

The specific goals of this report are to:

- "Communicate the criteria and procedures that Federal agencies should employ in considering new and revised test methods,
- Encourage the development of new and revised test methods that will provide for improved assessment of the potential toxicity of agents to human health and other organisms in the environment,
- Provide effective guidance for scientists for the validation and evaluation of new and revised test methods,
- Contribute to the increased likelihood of regulatory acceptance of scientifically valid new and revised test methods,
- Encourage the use of validated and accepted new and revised test methods,
- Encourage, when scientifically feasible, the reduction and refinement of animal use in testing and the replacement of animal methods with nonanimal methods or of animal species with phylogenetically lower species.

In developing the initial draft report, the Committee considered information obtained from the following sources: (1) A questionnaire completed by each agency on their criteria and processes for test method validation and acceptance, (2) public comments submitted in response to a Federal Register notice published December 7, 1994, requesting interested individuals and organizations to provide information for consideration by the Committee (appendix G), (3) presentations from various government scientists, (4) review of pertinent available literature, and (5) comments and suggestions from Federal agencies.

An NTP Workshop on Validation and Regulatory Acceptance of Alternative Test Methods was held on December 11-12, 1995, at the Crystal Gateway Marriott Hotel, Arlington, Virginia. The purpose of the workshop was to review the criteria and processes set forth in the draft report and accept comments and recommendations from workshop registrants and invited panelists, including representatives from industry, academia, public interest groups, and the international community. Written comments were also submitted in response to the Federal Register notice announcing availability of the draft report for public comment.

The draft report was also presented to participants at the Organization for Economic Cooperation and Development (OECD) Workshop on Harmonization of Validation Criteria for Alternative Test Methods held in Stockholm, Sweden, on January 22-24, 1996. Comments and recommendations generated by scientists from the 26 OECD member countries were considered by the Committee. The Committee prepared a revised draft report that was distributed to participating agencies for comment and concurrence prior to publication of the final report.

(Cont'd on next page)

Summary of the Report

The report totals 105 pages, and consists of four chapters. Chapter 1 is an introduction that provides a general overview of the need for toxicological test methods, how they are used, and the driving forces for the development and validation of new methods. Chapter 2 discusses the concept of validation and the criteria that should be met for a new or revised test method to be considered for regulatory risk assessment purposes. Chapter 3 discusses the criteria that should be used in considering the acceptability of a test method proposed for regulatory use. It also discusses the processes involved in achieving regulatory acceptance of a test method. A series of recommendations for developing a consistent and efficient process for evaluating new methods for regulatory acceptance is provided. Recommendations address development and validation, regulatory review of new methods, intra- and interagency coordination and harmonization, communication, and international harmonization. Chapter 4 discusses an implementation plan to facilitate the review and consideration of new test methods proposed for regulatory acceptance.

A standing interagency committee will be established to coordinate the development, validation, acceptance, and national/international harmonization of toxicological test methods. The committee will be designated as the Interagency Coordinating Committee on the Validation of Alternative Methods (ICCVAM) and will replace the ad hoc ICCVAM. The ICCVAM will seek to promote sound toxicological test methods that (1) enhance agencies' ability to assess risks and make decisions and (2) reduce animal use, refine procedures involving animals to make them less stressful, and replace animals in toxicological tests, where scientifically feasible and practical. The [ad hoc ICCVAM] Committee anticipates that this effort will help to better evaluate risks to human and animal health and the environment, reduce costs necessary to establish the safety of agents in commerce, and facilitate international trade.

Obtaining the Report

Retrieval instructions and the anticipated date for availability on the Internet can be found at the NTP website: <http://ntp-server.niehs.nih.gov>

To receive a copy of the report, please contact the NTP Liaison and Scientific Review Office, NIEHS, PO Box 12233, MD A3-01, Research Triangle Park, NC 27709, or by fax: (919) 541-0295. For further information about the report, please contact one of the ICCVAM co-chairs — Dr. William Stokes at NIEHS, PO Box 12233, Research Triangle Park, NC 27709, phone: (919) 541-7997, fax: (919) 541-0947, e-mail: stokes@niehs.nih.gov or Dr. Richard Hill, EPA, Mail Code 7101, 401 M Street, SW, Washington, DC 20460, phone: (202) 260-2897, fax: (202) 260-1847, or e-mail at hill.richard@epamail.epa.gov.

Dated: March 5, 1997

Kenneth Olden,
Director, National Institute of Environmental Health Sciences.

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BILLING CODE 4140-01-M ■

AWIC History cont'd from p.7

4. And fourth, in keeping with the long history of collaborations to produce information products, and to expand the use of currently available resources at diverse sites, we have become involved in an innovative, Internet-based project [see related article in box]. It resulted from the awareness of a number of forward-thinking people, who realized that electronic technology can now be harnessed to help address some of the problems researchers face in readily assessing useful information on the best available procedures for different research questions including reduction, refinement, or replacement alternatives. It is broadly recognized that searching for information on alternatives, as required by the AWA, presents difficult problems—for example, universal access to available information resources and identification of the most useful scientific literature. It was with these problems in mind that members of five organizations—Procter and Gamble (P&G), the Humane Society of the United States (HSUS), the Johns Hopkins Center for Alternatives to Animal Testing (CAAT), ILAR, and AWIC—agreed to do something about finding a solution. [Ed. note: ILAR has since decided not to participate in this project; Utrecht University in the Netherlands is also now participating.] It was decided to build a global consortium to support, coordinate, identify, harmonize, and develop information systems containing bibliographic and evaluative technical information available to help investigators address the 3 Rs of alternatives. Ideally, this would be one-stop shopping on the Internet.

The five initial planners have offered monetary resources and/or products and services—databases, computer expertise, subject-matter expertise, etc. AWIC will contribute relevant electronic products as well as the AWIC staff time and expertise in searching for alternatives to painful procedures. P&G and HSUS have agreed to contribute seed money to cover initial planning, administrative, hardware, and software costs.

Needless to say, such an electronic-based system will require additional funds, resources, technical guidance, and the efforts of many groups to bring it to fruition. We invite your support with ideas and resources—be they electronic or monetary to participate in this initiative so we can begin to deal more effectively with helping investigators find the best available research models.

The Animal Welfare Information Center has faced many hurdles in its first 10 years. As with all Federal agencies, we are being asked to provide continuing services with fewer resources. It is through collaborations such as this that AWIC will continue to provide quality information resources to our patrons during our second decade. ■

Brown cont'd from p.2

while, at the same time, developing regulations which do not cause unreasonable burdens.

A large portion of Americans feel strongly that animal care laws are important and should be enforced. The Animal Welfare Act has provided a baseline of humane care that is necessary and just. I am hopeful that we can move forward from here and provide a more meaningful level of protection for the thousands of animals under the current jurisdiction of APHIS. I look forward to seeing us move forward into the next 30 years of the Animal Welfare Act building on past successes and with a progressive approach toward rectifying the remaining problems associated with the enforcement of the Act. ■

"Meeting the Information Requirements of the Animal Welfare Act"

The Animal Welfare Information Center (AWIC) of the U.S. Department of Agriculture, National Agricultural Library (NAL) has developed a 2-day workshop for individuals who are responsible for providing information to meet the requirements of the Animal Welfare Act. The workshop will be held at NAL in Beltsville, Maryland.

The act requires that investigators provide Institutional Animal Care and Use Committees (IACUC) with documentation demonstrating that a thorough literature search was conducted regarding alternatives. An alternative is any procedure that results in the reduction in the numbers of animals used, refinement of techniques, or replacement of animals.

The objectives of the workshop are to provide:

- an overview of the Animal Welfare Act and the information requirements of the act.
- a review of the alternatives concept.
- a comprehensive introduction to NAL, AWIC, and other organizations.
- instruction on the use of existing information databases/networks.
- online database searching experience.

This workshop is targeted for principal investigators, members of IACUC's, information providers, administrators of animal use programs, and veterinarians. All participants will receive a resource manual.

The workshop will be held on October 16-17, 1997. The workshop will be limited to 20 people. There is presently no fee for the workshop.

For more information, contact AWIC at phone: (301) 504-6212, fax: (301) 504-7125, or e-mail: awic@nal.usda.gov, or write to: *Animal Welfare Information Center, U.S. Department of Agriculture, National Agricultural Library, 10301 Baltimore Avenue, Beltsville, MD 20705-2351*

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